



TORQ Analysis of Printing Machine Operators to Plating and Coating Machine Setters, Operators, and Tenders, Metal and Plastic

INPUT SECTION:

Transfer	Title	O* NET	Filters		
From Title:	Printing Machine Operators	51-5023.00	Abilities:	Importance Level: 50	Weight: 1
To Title:	Plating and Coating Machine Setters, Operators, and Tenders, Metal and Plastic	51-4193.00	Skills:	Importance Level: 69	Weight: 1
Labor Market Area:	Maine Statewide		Knowledge:	Importance Level: 69	Weight: 1

OUTPUT SECTION:

Grand TORQ:

86

Ability TORQ				Skills TORQ				Knowledge TORQ			
Level		<div><div></div></div> 87		Level		<div><div></div></div> 92		Level		<div><div></div></div> 80	
Gaps To Narrow if Possible				Upgrade These Skills				Knowledge to Add			
Ability	Level	Gap	Impt	Skill	Level	Gap	Impt	Knowledge	Level	Gap	Impt
Control Precision	44	3	66	No Skills Upgrade Required!				No Knowledge Upgrades Required!			
Information Ordering	39	1	50								

LEVEL and IMPT (IMPORTANCE) refer to the Target Plating and Coating Machine Setters, Operators, and Tenders, Metal and Plastic. GAP refers to level difference between Printing Machine Operators and Plating and Coating Machine Setters, Operators, and Tenders, Metal and Plastic.

ASK ANALYSIS

Ability Level Comparison - Abilities with importance scores over 50

Description	Printing Machine Operators	Plating and Coating Machine Setters, Operators, and Tenders, Metal and Plastic	Importance
Control Precision	41	44	66
Manual Dexterity	37	36	52
Information Ordering	38	39	50

Skill Level Comparison - Abilities with importance scores over 69

Description	Printing Machine Operators	Plating and Coating Machine Setters, Operators, and Tenders, Metal and Plastic	Importance
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Knowledge Level Comparison - Knowledge with importance scores over 69

Description	Printing Machine Operators	Plating and Coating Machine Setters, Operators, and Tenders, Metal and Plastic	Importance
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Experience & Education Comparison

Related Work Experience Comparison			Required Education Level Comparison		
Description	Printing Machine Operators	Plating and Coating Machine Setters, Operators, and Tenders, Metal and Plastic	Description	Printing Machine Operators	Plating and Coating Machine Setters, Operators, and Tenders, Metal and Plastic
10+ years	0%	0%	Doctoral	0%	0%
8-10 years	3%	0%	Professional Degree	0%	0%
6-8 years	0%	0%	Post-Masters Cert	0%	0%
4-6 years	7%	0%	Master's Degree	0%	0%
2-4 years	24%	5%	Post-Bachelor Cert	0%	0%
1-2 years	13%	1%	Bachelors	0%	0%
6-12 months	3%	3%	AA or Equiv	0%	0%
3-6 months	6%	0%	Some College	5%	0%
1-3 months	0%	15%	Post-Secondary Certificate	8%	4%
0-1 month	0%	16%	High School Diploma or GED	85%	67%
None	39%	55%	No HSD or GED	1%	28%

Printing Machine Operators

Plating and Coating Machine Setters, Operators, and Tenders, Metal and Plastic

Most Common Educational/Training Requirement:

Moderate-term on-the-job training

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Job Zone Comparison

2 - Job Zone Two: Some Preparation Needed

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Some previous work-related skill, knowledge, or experience may be helpful in these occupations, but usually is not needed. For example, a teller might benefit from experience working directly with the public, but an inexperienced person could still learn to be a teller with little difficulty.

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These occupations usually require a high school diploma and may require some vocational training or job-related course work. In some cases, an associate's or bachelor's degree could be needed.

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Tasks

Printing Machine Operators

Plating and Coating Machine Setters, Operators, and Tenders, Metal and Plastic

Core Tasks

Core Tasks



Generalized Work Activities:

- Controlling Machines and Processes - Using either control mechanisms or direct physical activity to operate machines or processes (not including computers or vehicles).
- Getting Information - Observing, receiving, and otherwise obtaining information from all relevant sources.
- Handling and Moving Objects - Using hands and arms in handling, installing, positioning, and moving materials, and manipulating things.
- Inspecting Equipment, Structures, or Material - Inspecting equipment, structures, or materials to identify the cause of errors or other problems or defects.
- Performing General Physical Activities - Performing physical activities that require considerable use of your arms and legs and moving your whole body, such as climbing, lifting, balancing, walking, stooping, and handling of materials.

Specific Tasks

Occupation Specific Tasks:

- Apply glue or tape to holes in screens in order to repair leaks.
- Attach cloth to take-up rollers, placing it in feeding position and threading it through equipment as necessary.
- Blend and test paint, inks, stains, and solvents according to types of material being printed and work order specifications.
- Clean and lubricate printing machines and components, using oil, solvents, brushes, rags, and hoses.
- Coordinate printing activities with activities of workers who set up, clean, and feed machines.
- Correct misprinted materials, using materials such as ink eradicators or solvents.
- Direct and monitor activities of workers feeding, inspecting, and tending printing machines and materials.
- Examine job orders to determine details such as quantities to be printed, production times, stock specifications, colors, and color sequences.
- Input instructions in order to program automated machinery, using a computer keyboard.
- Inspect and examine printed products for print clarity, color accuracy, conformance to specifications, and external defects.
- Load, position, and adjust unprinted materials on holding fixtures or in equipment loading and feeding mechanisms.
- Maintain records of goods produced,

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- Handling and Moving Objects - Using hands and arms in handling, installing, positioning, and moving materials, and manipulating things.
- Communicating with Supervisors, Peers, or Subordinates - Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
- Documenting/Recording Information - Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.
- Getting Information - Observing, receiving, and otherwise obtaining information from all relevant sources.

Specific Tasks

Occupation Specific Tasks:

- Adjust controls to set temperatures of coating substances and speeds of machines and equipment.
- Adjust dials to regulate flow of current and voltage supplied to terminals in order to control plating processes.
- Attach nozzles, position guns, connect hoses, and thread wire in order to set up metal-spraying machines.
- Charge furnaces.
- Clean and maintain equipment, using water hoses and scrapers.
- Clean workpieces, using wire brushes.
- Cut metal or other materials, using shears or band saws.
- Determine sizes and compositions of objects to be plated, and amounts of electrical current and time required.
- Examine completed objects to determine thicknesses of metal deposits, or measure thicknesses by using instruments such as micrometers.
- Immerse objects to be coated or plated into cleaning solutions, or spray objects with conductive solutions to prepare them for plating.
- Immerse workpieces in coating solutions or liquid metal or plastic for specified times.
- Inspect coated or plated areas for defects such as air bubbles or uneven coverage.
- Install gears and holding devices on conveyor equipment.
- Maintain production records.
- Measure and set stops, rolls, brushes,



supplies used, production costs, and machine maintenance and repair activities.

- Measure screens, and use measurements to center and align screens in proper positions and sequences on machines, using gauges and hand tools.
- Monitor and control operation of auxiliary equipment used to assemble and finish products.
- Monitor feeding, printing, and racking processes of presses in order to maintain specified operating levels and to detect malfunctions; make any necessary adjustments.
- Monitor stocks of materials such as paper, ink, and metal in order to maintain supplies during equipment operation.
- Operate equipment at slow speed to ensure proper ink coverage, alignment, and registration.
- Pack and label cartons, boxes, or bins of finished products.
- Place printed items in ovens to dry or set ink.
- Place spools of thread or wire on holders, and thread through machines.
- Position knives at specified distances from edges of plastic material in order to trim excess material from edges.
- Pour ink into pans, and smooth paint onto stencils, using flat-bladed knives.
- Pour or spread paint, ink, color compounds, and other materials into reservoirs, troughs, hoppers, or color holders of printing units, making measurements and adjustments to control color and viscosity.
- Prepare and treat lithographic plates with various chemicals to clean and preserve plates and fix images.
- Provide assistance in the design and layout of forms and materials to be printed.
- Push buttons, turn handles or move controls and levers to start and control printing machines.
- Remove printed materials from presses, using handtrucks, electric lifts, or hoists, and transport them to drying, storage or finishing areas.
- Repair, maintain, or adjust equipment.
- Reposition printing plates, adjust pressure rolls, or otherwise adjust machines to improve print quality, using knobs, handwheels, or hand tools.
- Requisition supplies, materials, and equipment, and receive stock when it arrives.
- Select and install printing plates, rollers, feed guides, gauges, screens, stencils, type, dies, and cylinders in machines according to specifications, using hand tools.
- Set and adjust speed, temperature, ink

and guides on automatic reeders and conveying equipment or coating machines, using micrometers, rules, and hand tools.

- Measure or weigh materials, using rulers, calculators, and scales.
- Measure, mark, and mask areas to be excluded from plating.
- Mix and test solutions, and turn valves to fill tanks with solutions.
- Monitor and measure thicknesses of electroplating on component parts in order to verify conformance to specifications, using micrometers.
- Observe gauges to ensure that machines are operating properly; make adjustments or stop machines when problems occur.
- Operate hoists to place workpieces onto machine feed carriages or spindles.
- Operate sandblasting equipment to roughen and clean surfaces of workpieces.
- Perform equipment maintenance such as cleaning tanks and lubricating moving parts of conveyors.
- Place plated or coated materials on racks and transfer them to ovens to dry for specified periods of time.
- Plate small objects such as nuts or bolts, using motor-driven barrels.
- Position and feed materials into processing machines, by hand or by using automated equipment.
- Position containers to receive parts, and load or unload materials in containers, using dollies or handtrucks.
- Position objects to be plated in frames, or suspend them from positive or negative terminals of power supplies.
- Preheat workpieces in ovens.
- Read production schedules to determine setups of equipment and machines.
- Remove excess materials or impurities from objects, using air hoses or grinding machines.
- Remove objects from solutions at periodic intervals and observe objects to verify conformance to specifications.
- Replace worn parts and adjust equipment components, using hand tools.
- Rinse coated objects in cleansing liquids; then dry them with cloths, centrifugal driers, or by tumbling in sawdust-filled barrels.
- Set up, operate, or tend plating or coating machines to coat metal or plastic products with chromium, zinc, copper, cadmium, nickel, or other metal to protect or decorate surfaces.
- Spray coating in specified patterns according to instructions.
- Suspend objects such as parts or molds from cathode rods (negative terminals), and immerse objects in plating solutions.



flow, and positions and pressure tolerances of equipment.

- Squeeze or spread ink on plates, pads, or rollers, using putty knives, brushes, or sponges.
- Thin printing compounds, using specified thinners.

Detailed Tasks

Detailed Work Activities:

- adjust production equipment/machinery setup
- assure quality control in printing processes
- attach or mark identification onto products or containers
- clean equipment or machinery
- collect payment
- demonstrate or explain assembly or use of equipment
- determine film exposure settings
- determine specifications
- develop film or other photographic medium
- direct and coordinate activities of workers or staff
- distinguish colors
- examine products or work to verify conformance to specifications
- fabricate printing plates
- identify color or balance
- install equipment or attachments on machinery or related structures
- load or unload material or workpiece into machinery
- load, unload, or stack containers, materials, or products
- maintain consistent production quality
- maintain or repair industrial or related equipment/machinery
- maintain production or work records
- measure, weigh, or count products or materials
- mix paint, ingredients, or chemicals, according to specifications
- mix printing solutions
- monitor production machinery/equipment operation to detect problems
- move or fit heavy objects
- operate bindery equipment
- operate cameras
- operate fabric printing equipment
- operate graphic reproduction equipment
- operate hoist, winch, or hydraulic boom
- operate printing equipment/machinery
- operate scanner
- perform safety inspections in

- Suspend sticks or pieces of plating metal from anodes (positive terminals) and immerse metal in plating solutions.
- Test machinery to ensure that it is operating properly.

Detailed Tasks

Detailed Work Activities:

- adjust production equipment/machinery setup
- apply adhesives, caulking, sealants, or coatings
- clean equipment or machinery
- examine products or work to verify conformance to specifications
- install equipment or attachments on machinery or related structures
- load or unload material or workpiece into machinery
- load, unload, or stack containers, materials, or products
- maintain or repair industrial or related equipment/machinery
- maintain production or work records
- measure, weigh, or count products or materials
- mix paint, ingredients, or chemicals, according to specifications
- monitor production machinery/equipment operation to detect problems
- move or fit heavy objects
- operate hoist, winch, or hydraulic boom
- operate metal or plastic fabricating equipment/machinery
- perform safety inspections in manufacturing or industrial setting
- read specifications
- read work order, instructions, formulas, or processing charts
- set up computer numerical control machines
- set up production equipment or machinery
- understand technical operating, service or repair manuals
- use hand or power tools
- use precision measuring tools or equipment
- use spray application production equipment

Technology - Examples



manufacturing or industrial setting

- process photographic prints
- read production layouts
- read specifications
- read work order, instructions, formulas, or processing charts
- receive customer orders
- restore photographs
- retouch negatives or prints
- set page layout or composition
- set up production equipment or machinery
- strip negatives
- understand technical operating, service or repair manuals
- use color analyzer
- use densitometer
- use desktop publishing software
- use hand or power tools
- use precision measuring tools or equipment

Technology - Examples

Calendar and scheduling software

- Job scheduling software

Data base user interface and query software

- Printing management system software

Electronic mail software

- Microsoft Outlook

Inventory management software

- Inventory tracking software

Spreadsheet software

- Microsoft Excel

Word processing software

- Microsoft Word

Tools - Examples

- Adjustable wrenches

- Materials conveyors

- Conductivity indicators

- Densitometers

- Desktop computers

- Flexo presses

- Grease guns

- Claw hammers



- Hand trucks
- Packing gauges
- Hoists
- Pallet jacks
- Letter presses
- Electric lifts
- Vise grip pliers
- Hand-held magnifiers
- Micrometers
- Offset printing equipment
- Paper drills
- Paper joggers
- Perforators
- Personal computers
- pH indicators
- Digital copiers
- Gravure presses
- Platemaking equipment
- Folding equipment
- Collating equipment
- Cutting equipment
- Multicolor presses
- Putty knives
- Ratchets
- Phillips head screwdrivers
- Screen printing presses
- Stackers
- Stapling machines
- Measuring tapes
- Strappers

Labor Market Comparison



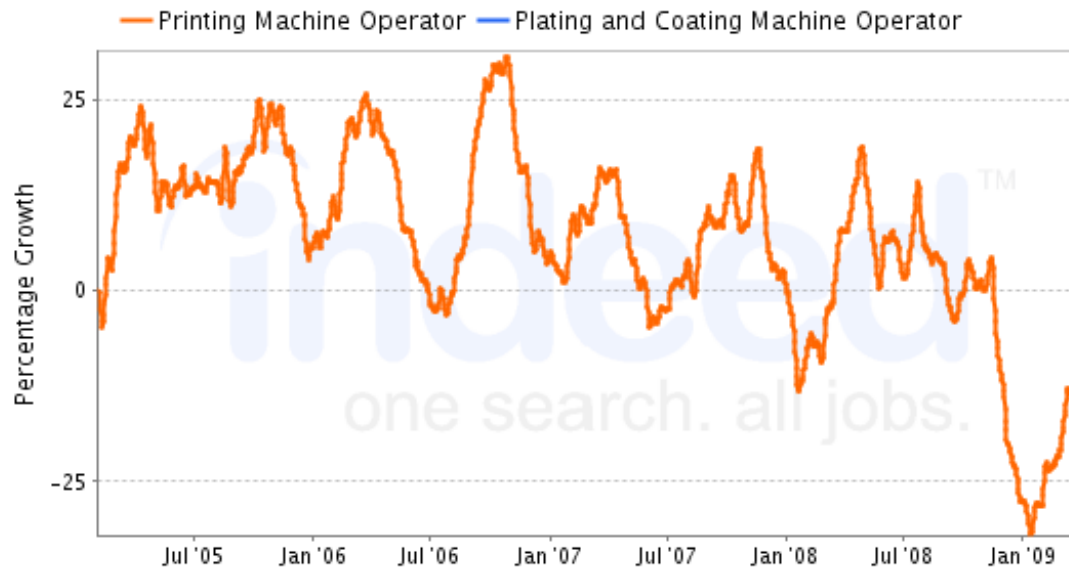
Description	Printing Machine Operators	Plating and Coating Machine Setters, Operators, and Tenders, Metal and Plastic	Difference
Median Wage	\$ 29,710	\$ 32,160	\$ 2,450
10th Percentile Wage	\$ 21,270	\$ 21,560	\$ 290
25th Percentile Wage	N/A	N/A	N/A
75th Percentile Wage	\$ 36,080	\$ 36,780	\$ 700
90th Percentile Wage	\$ 44,010	\$ 43,000	\$(1,010)
Mean Wage	\$ 30,870	\$ 31,530	\$ 660
Total Employment - 2007	790	120	-670
Employment Base - 2006	820	115	-705
Projected Employment - 2016	798	133	-665
Projected Job Growth - 2006-2016	-2.7 %	15.7 %	18.3 %
Projected Annual Openings - 2006-2016	18	5	-13

National Job Posting Trends

Trend for Printing Machine Operators

Trend for Plating and Coating Machine Setters, Operators, and Tenders, Metal and Plastic

Job Trends from Indeed.com



Data from [Indeed](http://Indeed.com)



Recommended Programs

Precision Metal Workers, Other

Precision Metal Working, Other. Any instructional program in precision metal work not listed above.

No schools available for the program

Maine Statewide Promotion Opportunities for Printing Machine Operators

O*NET Code	Title	Grand TORQ	Job Zone	Employment	Median Wage	Difference	Growth	Annual Job Openings
51-5023.00	Printing Machine Operators	100	2	790	\$29,710.00	\$0.00	-3%	18
51-4193.00	Plating and Coating Machine Setters, Operators, and Tenders, Metal and Plastic	86	2	120	\$32,160.00	\$2,450.00	16%	5
51-4122.00	Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders	84	2	120	\$36,960.00	\$7,250.00	2%	3
51-9196.00	Paper Goods Machine Setters, Operators, and Tenders	81	2	910	\$38,230.00	\$8,520.00	-26%	23
51-4034.00	Lathe and Turning Machine Tool Setters, Operators, and Tenders, Metal and Plastic	80	3	110	\$34,350.00	\$4,640.00	-9%	2
51-9071.06	Gem and Diamond Workers	80	2	220	\$32,520.00	\$2,810.00	7%	7
51-4121.07	Solderers and Brazers	79	2	1,610	\$38,030.00	\$8,320.00	7%	49
51-5021.00	Job Printers	79	3	140	\$31,890.00	\$2,180.00	-10%	2
51-9032.00	Cutting and Slicing Machine Setters, Operators, and Tenders	78	2	710	\$31,350.00	\$1,640.00	-23%	12
51-9023.00	Mixing and Blending Machine Setters, Operators, and Tenders	77	1	420	\$36,040.00	\$6,330.00	-9%	7
51-9121.00	Coating, Painting, and Spraying Machine Setters, Operators, and Tenders	77	2	850	\$38,860.00	\$9,150.00	-26%	19



51-9122.00	Painters, Transportation Equipment	77	2	320	\$32,230.00	\$2,520.00	2%	8
51-2021.00	Coil Winders, Tapers, and Finishers	77	2	90	\$31,910.00	\$2,200.00	-53%	1
51-9051.00	Furnace, Kiln, Oven, Drier, and Kettle Operators and Tenders	76	2	300	\$32,980.00	\$3,270.00	-18%	9
51-4032.00	Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic	76	2	100	\$33,030.00	\$3,320.00	-22%	2

Top Industries for Plating and Coating Machine Setters, Operators, and Tenders, Metal and Plastic

Industry	NAICS	% in Industry	Employment	Projected Employment	% Change
Coating, engraving, heat treating, and allied activities	332800	50.92%	21,333	18,249	-14.46%
Semiconductor and other electronic component manufacturing	334400	9.46%	3,964	3,616	-8.78%
Other electrical equipment and component manufacturing	335900	3.84%	1,609	1,556	-3.29%
Other fabricated metal product manufacturing	332900	3.20%	1,340	1,239	-7.53%
Motor vehicle parts manufacturing	336300	2.97%	1,246	1,036	-16.91%
Alumina and aluminum production and processing	331300	2.13%	894	650	-27.36%
Iron and steel mills and ferroalloy manufacturing	331100	1.81%	759	533	-29.75%
Architectural and structural metals manufacturing	332300	1.59%	665	742	11.47%
Federal government, excluding postal service	919999	1.29%	540	533	-1.34%
Aerospace product and parts manufacturing	336400	1.17%	488	519	6.29%
Machine shops	332710	0.96%	401	347	-13.67%
Foundries	331500	0.92%	384	291	-24.33%
Turned product and screw, nut, and bolt manufacturing	332720	0.88%	369	279	-24.36%
Manufacturing and reproducing magnetic and optical media	334600	0.86%	362	371	2.55%
Steel product manufacturing from purchased steel	331200	0.85%	358	331	-7.64%



Top Industries for Printing Machine Operators

Industry	NAICS	% in Industry	Employment	Projected Employment	% Change
Printing and related support activities	323100	50.92%	100,610	90,254	-10.29%
Newspaper publishers	511110	7.59%	14,990	12,841	-14.33%
Converted paper product manufacturing	322200	6.58%	12,998	10,908	-16.08%
Advertising and related services	541800	3.23%	6,387	7,207	12.83%
Plastics product manufacturing	326100	2.76%	5,460	5,788	6.00%
Specialized design services	541400	1.92%	3,793	5,076	33.81%
Textile and fabric finishing and fabric coating mills	313300	1.66%	3,277	2,021	-38.33%
Self-employed workers, primary job	000601	1.45%	2,864	3,052	6.54%
Employment services	561300	1.41%	2,783	3,522	26.56%
Colleges, universities, and professional schools, public and private	611300	0.89%	1,761	1,970	11.87%
Animal slaughtering and processing	311600	0.86%	1,706	1,947	14.13%
Paper and paper product merchant wholesalers	424100	0.80%	1,585	1,693	6.83%
Self-employed workers, secondary job	000602	0.74%	1,465	1,459	-0.45%
Cut and sew apparel manufacturing	315200	0.64%	1,266	534	-57.77%
Clothing stores	448100	0.61%	1,203	1,263	4.97%